



## State of Utah

### Department of Natural Resources

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### Division of Oil, Gas & Mining

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January 6, 2006

CERTIFIED RETURN RECEIPT  
7002 0510 0003 8603 2533

Mark Carter  
MMG Mining  
3655 Lupin Way  
St. George, Utah 84790

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, MMG Mining Company, Bald Knoll Mine, M/025/012, Kane County, Utah

Dear Mr. Carter:

The Division has completed our review of your draft Notice of Intention to Commence Large Mining Operations for the Bald Knoll Mine, located in Kane County, Utah, which was received November 9, 2005. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion and **address only those items requested in the attached technical review** by sending replacement pages of the original mining notice **using redline and strikeout text**. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies are required, one copy stamped "approved" will be returned.

The Division will suspend further review of the Bald Knoll Mine Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me, or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White  
Mining Coordinator  
Minerals Regulatory Program

SMW:dj:pb

Attachment: Review

cc: 3-H Landscape Products  
John Blake, SITLA

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## **REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

**MMG Mining Company  
Bald Knoll Mine**

**M/035/012  
January 6, 2006**

### **R647-4-105 - Maps, Drawings & Photographs**

- 105.1 Topographic base map, boundaries, pre-act disturbance  
The application indicates that the Division has the pictures and maps needed.  
The Division presently has a GPS map of the disturbance and of the area reclaimed at the site. The additional information noted under Section 105.1.e needs to be included. (DJ)
- 105.2 Surface facilities map  
All of the information requested under this section of the MR-LMO needs to be submitted. (DJ)
- 105.3 Reclamation Treatments Map, Drawings or Cross Sections (slopes, roads, pads, etc.)  
A Reclamation Treatments Map needs to be supplied with the application. Items a thru e needs to be shown on this map. (DJ)  
A minimum of one north south and one east west cross-section through the mine area is needs to be included showing the surface before mining, after mining and after reclamation. (DJ)

### **R647-4-106 - Operation Plan**

- 106.2 Type of operations conducted, mining method, processing etc.  
This section of the plan indicates that the mine performs continuous reclamation.  
Please show these areas and state in the plan how the continuous reclamation is to be accomplished. (DJ)
- 106.3 Estimated acreages disturbed, reclaimed, annually.  
The estimated acreage shows only the acreage presently disturbed at the site.  
If this acreage figure shown in the plan remains, the mine will not be allowed to expand without an amendment to this plan. (DJ)

The estimated acreage indicates a total of 8.016 acres of disturbance, 3.4 acres of mining and 4.616 acres that have been reclaimed/regraded.

A GPS survey performed by the Division on October 24, 2005, shows 3.73 acres of mining, 4.62 acres that have been reclaimed and 0.68 acres of roads. A pre-existing road disturbance of 0.43 acres was included in this total road disturbance; MMG will only be responsible for reclaiming the road disturbance totaling 0.25 acres. The total acreage for the present disturbance should read 8.6 acres. (DJ)

The plan indicates that 500 cy of overburden and 500 cy of reject material will be produced annually.

Maps included in the plan should show the planned location of the overburden and reject piles. Is the overburden the same as the soil that will be salvaged? (DJ and PBB)



106.5 Existing soil types, location, amount

The plan says that between two and four feet of soil will be salvaged and stockpiled from a 1.5-acre area (the same as the thickness of overburden). Is all of this material suitable for use as soil? What is the depth of topsoil? Topsoil is unlikely to extend to a depth of two to four feet, so what is the nature of the subsoil? Is it suitable for plant growth, or is there excessive clay or salt that would make it harmful to plants? Please provide soil survey information and tests showing the chemical and physical nature of this material. Tests should include texture (including coarse fragments), pH, electrical conductivity, sodium adsorption ratio, and the major nutrients (nitrogen, phosphorous, and potassium). Samples should be taken from near the middle and the bottom of the material to be salvaged. These samples could be sent to soils labs at Brigham Young University, Utah State University, or to one of several private labs. (PBB)

Are there existing soil stockpiles? Assuming some soil has been harvested, please provide an estimate of the amount of material in these stockpiles, and please provide information about what type of material was salvaged. Is it similar to the material that will be salvaged from the 1.5-acre area discussed above? (PBB)

Please clarify the acreage over which soil will need to be placed. What is the total volume of soil available, and what will be the depth of distribution? (PBB)

106.6 Plan for protecting & redepositing soils

The plan indicates that a depth of topsoil between 24 and 48 inches exist at the site, but only 500 cy will be stockpiled.

Calculations indicate that between 4840 cy and 9680 cy exist on the indicated 1.5 acres. Please include in the plan a commitment to harvest all suitable growth material. (DJ)

Are there soil stockpiles, or will stockpiles be created? If so, please show the locations on a map. Any stockpiles would need to be seeded, and a plan for establishing temporary vegetation cover should be included. (PBB)

As the plan is developed, additional information or commitments relating to soil salvage, storage, protection, and distribution may be needed. (PBB)

106.7 Existing vegetation - species and amount

The plan includes what appear to be relative cover values for juniper, pinyon, oak, sage, and grasses, but this is not adequate for establishing a revegetation cover standard as required in R647-4-106.7. The percentages of cover from the different species when combined with bare ground, litter, and rock should equal 100 percent. Please include vegetation cover values by species; this is very helpful in developing and reviewing the revegetation plan. (PBB)

106.9 Location & size of ore, waste, tailings, ponds

The plan notes that overburden and reject stockpiling does not apply to this site. Section 106.4 of the plan indicates that ~1000 cy of reject and overburden will be produced annually. If this is the case please indicate where this material will be stored during operations. (DJ)

**R647-4-107 - Operation Practices**



- 107.1.14 Constructing berms, fences, etc. above highwalls  
Berms should be place above highwalls until the slopes are recontoured during final reclamation. (DJ)
- 107.4 Deleterious material safety stored or removed  
Photos of the site show fuel tanks that do not have secondary containment.  
All fuel tanks at the site should be placed in a secondary containment equivalent to 110% of the capacity of the tank. (DJ)
- 107.5 Suitable soils removed & stored  
Please show locations of soil stockpiles on the reclamation treatments map. (DJ)
- 107.6 Concurrent reclamation  
The plan states that continuous yearly reclamation will take place at the site.  
Please show on the reclamation treatments map where this planned reclamation will take place. (DJ)

#### **R647-4-109 - Impact Assessment**

- 109.2 Impacts to threatened & endangered wildlife/habitat  
The plan says there are no known endangered animal or plant species in the area, and the Division has confirmed this statement with the Natural Heritage Program in the Division of Wildlife Resources. There are, however, records of spotted bats, a sensitive species, in the area. Spotted bats require cliffs and rock crevices, and there is no habitat like this at the mine. No changes to the plan are required. (PBB)

The Bureau of Land Management reports there is a bald eagle nest near Alton, and although haul trucks from the mine could potentially disrupt use of this nest, the mine itself is far enough away that it is unlikely to have any effect. (PBB)

#### **R647-4-110 - Reclamation Plan**

- 110.1 Current & post mining land use  
The plan says the pre- and post mining land use is grazing. It appears the area is probably also used as wildlife habitat. Please confirm whether this is correct and make changes in the plan as necessary. (PBB)

- 110.5 Revegetation planting program  
It appears there are roads that will need to be reclaimed. Please show how compaction will be alleviated on the roads and in all other areas that are compacted. (PBB)

The plan says areas to be revegetated will be covered with topsoil, disked, and seeded. It also includes a commitment to leave the surface rough, but disking does not usually leave the surface adequately roughened. The Division recommends ripping the surface or creating pockmarks with a trackhoe. To be effective, the surface needs to be extremely rough. (PBB)

Please include a seed mix that shows what species will be planted and at what rates (pounds of pure live seed/acre). (PBB)



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January 10, 2006

The plan says the surface will be dragged with a light screen following seeding, but dragging with a screen tends to decrease roughness. Seed should be applied into the loose topsoil as soon after surface preparation as possible, and if seeding is done properly, dragging is not necessary. The seed will sink into the soil as it settles. Please modify the plan to include these commitments. (PBB)

Please include a commitment to seed in the fall. (PBB)

**R647-4-113 - Surety**

A surety amount cannot be calculated until the plan has been completed.  
(DJ)

**R647-4-115 - Confidential Information**

No confidential information was noted in the plan.